

their great length we must regret that we are unable to introduce them into the Annals, and can only refer our readers to them as most valuable sources of information. Among the contributors to the Archiv will be found the names of Link, Kunth, Dr. Schleiden, Dr. Philippi, Prof. Muller, Ehrenberg, Anton, Nitzsch, Wagner, Klug, Burmeister, Dr. Fritsche of St. Petersburg, Schlegel, Nathusius, and various other celebrated naturalists of Germany. Six parts appear yearly, and as nearly as possible every two months; sometimes, however, two parts appear together. Part I. of the fourth year (1838) contains the following original articles:—On the Manati of Orinoko from the manuscript of A. v. Humboldt, with an appendix by Prof. Wiegmann.—On the European *Soricidæ*, by H. Nathusius.—Use of the Nuthatch (*Sitta Europæa*) in destroying weevils.—Botanical Notices, by Dr. Schleiden.—On two new genera of Coleoptera from Madagascar, by Prof. Klug.—On the genera of the Plagiostomi, by Müller and Henle; with translations of Agassiz's Memoir on the family of the Carps, and J. E. Gray's on the *Mastradæ*. We hope to be able to give some extracts from the above in our next number.

PROCEEDINGS OF LEARNED SOCIETIES.

ZOOLOGICAL SOCIETY.

October 10th, 1837, R. Owen, Esq., in the Chair.—A paper was read by Colonel Sykes "On the identity of the "Wild Ass of Cutch and the Indus, with the Dzeggetai (*Equus Hemionus* of Pallas)."

The author commences with observing, "it is somewhat strange and anomalous, that an animal known to and named by Aristotle, and noticed by Ælian, Pliny, and subsequent authors, down to our own day, an animal remarkable for its beauty of colour, the antelope lightness of its limbs, and the tales of its swiftness, and its classic locality, should have attracted so little the attention of men of science, that it was not even figured until Pallas put it before the public*. The magnificent work of Buffon does not boast a representation of it; and as the proceedings of the scientific body at Petersburg are necessarily rare, and confined to some few great public libraries, it was in fact scarcely known to the European world, even though Pennant copied Pallas's account in 1793. To remedy this defect we are indebted to M. Isidore Geoffroy Saint Hilaire, who took advantage of the importation by M. Dussumier, of a female into the Paris Menagerie, to have a correct coloured figure made to accompany his paper, 'Sur le Genre Cheval,' in the Nouvelles An-

* In the *Novi Commentarii Academie Scientiarum Petropolitane*, t. xix. 1774, p. 417.

nales du Muséum d'Histoire Naturelle*. Though I have been an amateur of Natural History for a great part of my life, I must confess that it is to a private copy of M. St. Hilaire's paper, obligingly presented to the Zoological Society of London, that I am indebted for my first view of a coloured representation of the Dzeggetai, and it was only last week that this fell into my hands. I have been thus particular in noticing the want of readily accessible figures of animals (for my observation will apply to many other animals beside the Dzeggetai,) as this want of means to correct my judgement led me into the belief that a recently imported Wild Ass of Cutch, which was sent to England by an old friend of my own from Bombay, was a different species from the Dzeggetai of Pallas, which is represented as inhabiting the desert regions between the rivers Onon and Argun, on the southern parts of Siberia, through Tartary, even to the frontiers of China and Thibet; and I might have been justified in my supposition had I attached the same weight that some naturalists do, to the opinion that the geographical distribution of animals is regulated by mean temperature, the Dzeggetai of Pallas inhabiting the borders of the arctic regions, the Wild Ass of India the borders of the torrid zone. There might be yet further question for doubt, did we take the description of colour from Griffith's edition of the 'Règne Animal,' in which it is stated 'there is a *black* dorsal line which enlarges on the crupper. In winter the hair is very long; but of a smooth and shining appearance in summer. The colour of the body is an *uniform* light bay, but in winter it partakes more of red †; and the forehead is described as 'flatted and narrow.'

'M. St. Hilaire, who describes from the life, says 'Les deux couleurs dominantes de l'*Hemione*, le blanc et l'isabelle passent l'une à l'autre par nuances insensibles sur le ventre, vers sa partie inférieure, et sur le cou, presque à égal distance de son bord supérieur, et de son bord inférieur. Sur la tête au contraire, le blanc n'occupe guère que le museau et la gorge, le cou étant presque entièrement isabelle. Sur les membres, contrairement à ce qui a lieu sur le corps, c'est le blanc qui domine,' &c. Again, 'Tout ce système de coloration est rebassé supérieurement par une *bande* dorsale longitudinale, *non pas noire* comme on l'a dit, mais d'un brun légèrement rousâtre.' And now with respect to the *change* of colour with the season of the year, instead of getting redder in winter it would appear from the observations of M. Fred. Cuvier, that the animal a le poil plus *gris*, plus *pale* et plus long l'hiver que l'été.' These discrepancies

* t. iv. p. 97.

† Quarto edit., vol. iii. p. 460.

would have afforded to those strongly disposed to multiply species, some feeble grounds (particularly when I come to notice a point of conformation in the head,) for asserting the right of the Wild Ass of Cutch to the dignity of a specific character, for it will be borne in mind that M. St. Hilaire describes his specimen, which was a native of Cutch; while in Griffith's Cuvier the description refers to the Dzeggetai, whose habitat is from southern Siberia to Thibet and China; and we do not want instances of equally trifling discrepancies having been made available for multiplying species.

“ And now with respect to the animals in the Zoological Gardens, the one being called Dzeggetai, and marked on its ticket Mongolia and Asia; the other known positively as the Wild Ass from Cutch. The first, a male, has been in the possession of the Society since the 3rd of March 1832, and was presented to the Society by Captain Glasspoole, R.N. Its birth-place is not known; but from the nature of Captain Glasspoole's maritime duties, which carried his ship along the coasts Cutch, Scind, and Persia, there is little doubt of its being from one of these states; and as it is absolutely identical with the animal I am about to speak of, my own judgement is formed on the subject. This creature has long been known in the gardens from its great beauty, its fine condition, its vivacity, and its wickedness. The second animal was sent while quite a colt by an old friend of mine, the British Minister in Cutch, to the Military Auditor General of Bombay. It was allowed for a considerable period, (pending an answer from me, whether or not I would accept of it,) to amuse the children; it was permitted to attend at breakfast-time, and eat from the table; but manifesting as it grew up symptoms of ill nature, (no doubt having been heartily teased,) it was put on board the Marquess of Hastings, Captain Clarkson, and brought to England: there cannot therefore be any doubt respecting its origin and its history; and having one animal certainly from Cutch, we have a positive standard of comparison. Like the preceding, it is a male, and with the exception of being younger and smaller, and with a less short and glossy coat, it is identical with it in every feature; and these two agree in all essentials with M. St. Hilaire's very able and minute description and coloured figure of a female in the Paris Menagerie. There is one point only in which there may be a difference, and there are two or three others in which there is a difference. M. St. Hilaire does not state whether the forehead be flat or prominent; and though the figure represents it to be somewhat raised, it is certainly not so much so as in the animals in the Zoological Gardens: with them the frontal development is a very prominent feature; such fea-

ture, however, being opposed to the descriptions in Griffith's 'Règne Animal.' M. St. Hilaire also mentions another character, which it required some little perseverance to discover in the larger animal in the Zoological Gardens, the smaller animal being absolutely destitute of it. He states that on the isabella colour on the limbs, there are transverse lines or very narrow bands of a darker isabella, in the manner of the markings of the Zebra. These lines had never been observed by the keepers in the Zoological Gardens, and for some time I could not discover them; but at last with a reflected light I could just discern the transverse lines noticed by M. St. Hilaire, but I was not so fortunate with the smaller animal. M. St. Hilaire, on the authority of M. Geoffroy-Chateau, who sent to him a description of a male Dzeggetai in Cross's Menagerie in London, states that there was a disposition in the dorsal band on that animal, by lateral projections at the withers, to form a small cross, like that of an ass. There is not the slightest trace or manifestation of such a thing in either of the animals in the Zoological Gardens. Finally, M. St. Hilaire speaks of the blending by insensible degrees of the isabella and white markings of the Dzeggetai, but in our animals the lines of demarcation are sufficiently strong.

"M. St. Hilaire's humorous description of the habits of kicking of the female at Paris, is laughably exact with respect to our animals, particularly the smaller one. I had sent one of the keepers into its yard with some hay, to throw down before it, to keep it stationary (at least its body) while I took a rapid sketch of it with the assistance of the camera lucida. The moment the hay was thrown down, the creature turned round and commenced flinging out most vigorously for some time, although the man was gone, and the odd beast all the time was gravely munching its hay. So petulant were both these creatures, that after having sketched them I could not get any of the keepers to take their measurements, nor could I succeed in obtaining them, but by getting them thrown down, which I declined to do. With respect to the swiftness of the Wild Ass of Cutch, without quoting from Griffith 'that it runs literally with the rapidity of lightning,' or from M. St. Hilaire, who says, 'it appeared to him to go as fast as the best race horses;' I will mention in confirmation of its extraordinary swiftness, that my friend Major Wilkins, of the Cavalry of the Bombay Army, who was stationed with his regiment for years at Deesa, on the borders of the Run or Salt Marshes, east of Cutch, in his morning rides used to start a particular Wild Ass so frequently that it became familiar to him, and he always gave chase to it; and though he piqued himself upon being mounted on an exceedingly fleet Arabian horse, he never could come up with the animal.

“ It now remains to express my reasons for believing with M. St. Hilaire, that the Wild Ass of Cutch is the same as the *Equus Hemionus* of Pallas. There are certainly sundry discrepancies in the accounts of the two animals; in the colour, the dorsal line, the forehead, and above all in the difference of mean temperatures between the northern and southern habitat of the species. But all the discrepancies of descriptions may be easily remedied by the supposition that animals examined by different individuals at different seasons of the year, did really slightly differ, owing to the difference of seasons; and some part of the differences may be attributed to inattention to terms. There are slight discrepancies between M. St. Hilaire’s description and mine, both taken from life, and the animals from the same locality; no one therefore can doubt their identity. In the main features the Dzeggetai and the Wild Ass of Cutch perfectly agree; and with respect to the extent of geographical distributions, I have elsewhere proved that it is no bar to the identity of species inhabiting mean temperatures varying nearly 40° of Fahr., and separated by half the earth in longitude. But in the case of the Dzeggetai and the Wild Ass of Cutch, there are not any insuperable difficulties of geographical position. The Wild Ass of Cutch and the north of Goojrat, is not found further south in India than Deesa on the banks of the Bunnas river, in lat. about $23^{\circ} 30'$, nor have I heard of it to the eastward of the 75° of longitude in the southern side of the Himalayan Mountains. In Cutch and Northern Goojrat it frequents the salt deserts and the open plains of Thoodpoor, Jaysulmer, and Bickaneor. By swimming the Indus it may communicate through Scind and Buloochestand with Persia; and in Persia it evidently exists from Sir Robert Kerr Porter’s descriptions; to the east and north of Persia abuts upon the peculiar localities of the Dzeggetai, through Bucharia to the deserts of Cobi, where it delights in the salt marshes, as it does in India, and thence to Tartary, Thibet, and South Siberia. The latitudinal range may be from 35° to 40° ; but the longitudinal range is necessarily very great, probably from the 45° to the 130° or 140° , or 95° of longitude; but in case it ever was found in Cappadocia it would have a still greater range, or 100° . If it be desirable to believe that the animal migrates according to the season, there do not appear to be any insuperable physical impediments; and its extraordinary fleetness and hardihood would sanction the belief in its making very long journeys, even to the banks of the Indus. But the animal of Cutch and the Burmass river, would have to cross the Indus and its branches to get to the north and west; and as they are seen at all seasons of the year in their Indian localities, I am quite content to

believe that the Dzeggetai of Southern Siberia and the Wild Ass of Cutch are identical in species, and yet do not wander further than is necessary for forage from their respective localities. I say little of the advantage of domesticating this beautiful animal in Europe, but I do say that it would be worthy of the reputation of the great Society, to continue the attempt until success crowned its efforts.

“I wish also through the medium of the Society’s Proceedings to call the attention of naturalists, amateurs, and travellers, who cannot even draw at all, to the means the camera lucida affords them of recording outlines with celerity and precision. I exhibit to the Society five sketches of the two Wild Asses in the Zoological Gardens; and though I do not profess not to be able to draw, I do not hesitate to say that I can give much more correct figures of animals by its means than without it. It may be objected that the restlessness of animals renders the use of the camera lucida abortive; but I say that the rapidity with which the lines may be traced with the pencil, enable a person using it to make twenty sketches, where the draughtsman would otherwise make but one, and it will be hard if more than one of the twenty do not prove just. The five sketches exhibited were made in a few minutes; and only one proved abortive, making six attempts in all; and yet I have not used the camera lucida since 1830. The outlines have been subsequently traced in ink. I trust therefore this notice may lead to its more extended use; a use in natural history that cannot fail to be beneficial to the science. One word in conclusion. I have been a declaimer in the Transactions of this Society against the modern habit in natural history of generalization from a limited number of facts; and in pursuing the above inquiries I met with a new proof of the risk to truth of such a system. In the history of the Domestic Ass it is stated, ‘The countries most suitable to the Ass are those of the south. Accordingly it is in Persia, Egypt, and Arabia that the strongest and finest varieties of this species are to be found. Some, very different from the small and feeble natives of our climates, almost equal the Horse in magnitude and stature. Spain also possesses some fine races of the Ass, which are also occasionally to be found in the southern provinces of France; as *we advance northward*, the animal diminishes in size and becomes more and more difficult of preservation.’ Opposed to this is the fact, that in Western India, which it will be admitted is sufficiently far to the south, the Asses are not much larger than good-sized Newfoundland dogs. They are used in droves to carry small loads of salt or grain; they are also used by the pot-makers to carry their clay; and they are always seen, as in Europe, associated with gipsies.”